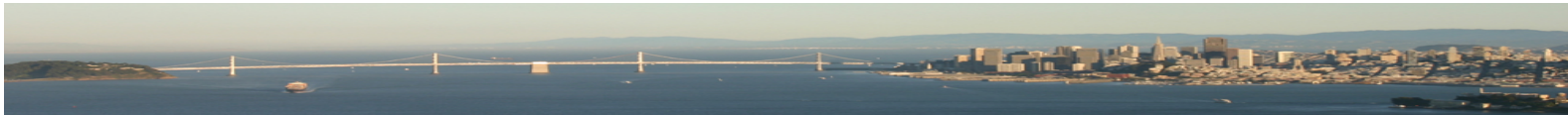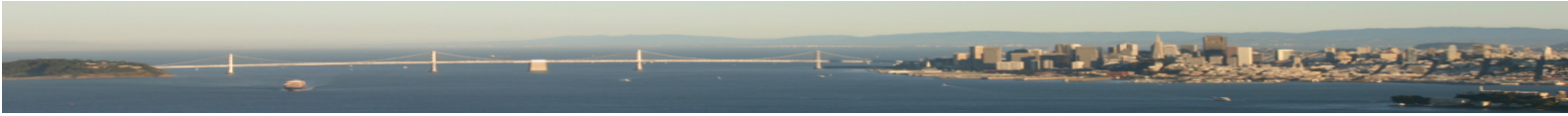**Adaptrum is a Silicon Valley based startup developing wireless technologies and market based mechanisms to enable new, competitive multiservice networks**
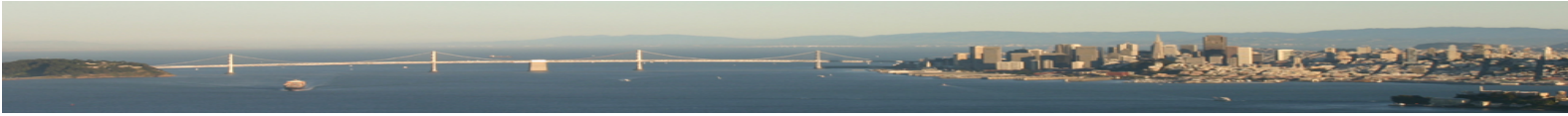
www.adaptrum.com

ADAPTRUM INNOVATION

- ## Spectrum
  - <u>Spectrum pooling</u>: unlicensed and licensed, government and commercial, broadcast and land mobile
  - <u>Bands below 1 GHz initially</u>: VHF/UHF TV whitespace, LPTV, 900 MHz ISM, Government public safety and military bands
  - <u>QoS and multi service</u> built-in and ground-up

- ## Network
  - <u>Unlicensed wide-area network</u>: WiFi like organic built-out
  - <u>Real-time autonomous resource and interference management</u>
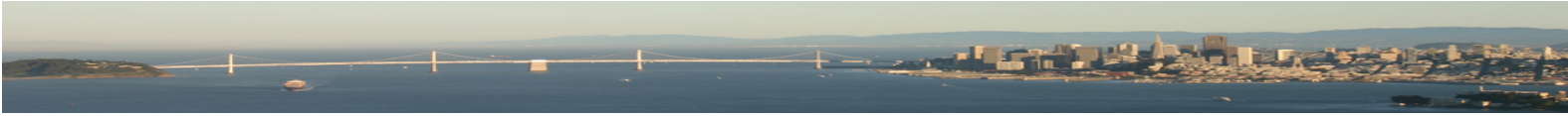 - <u>Self organizing and optimizing</u>

2010 AND BEYOND

- Whitespace Rulemaking
  - <u>Timeline</u>: reconsideration, database, certification
  - <u>Outstanding issues</u>: wireless microphone, TV contour, power levels
- <u>Adaptrum is ready for TVBD certification</u> followed by initial commercial launch
- Policy to Foster Innovation
  - Fostering innovation has been the Commission's tradition: CDMA, WiFi
  - Cognitive radio technology holds the great potential to solve the Nation's spectrum utilization problem and offers an alternative to address the mobile broadband problem
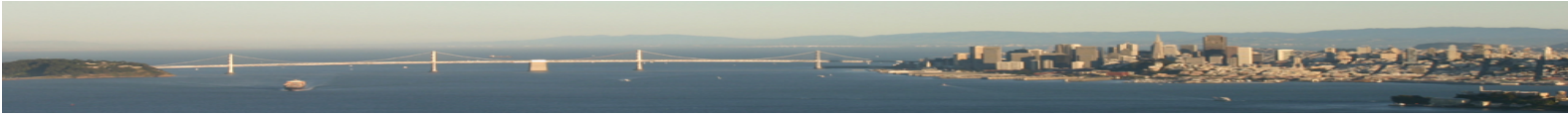 - Whitespace is the key first step to allow CR technology to flourish in the marketplace
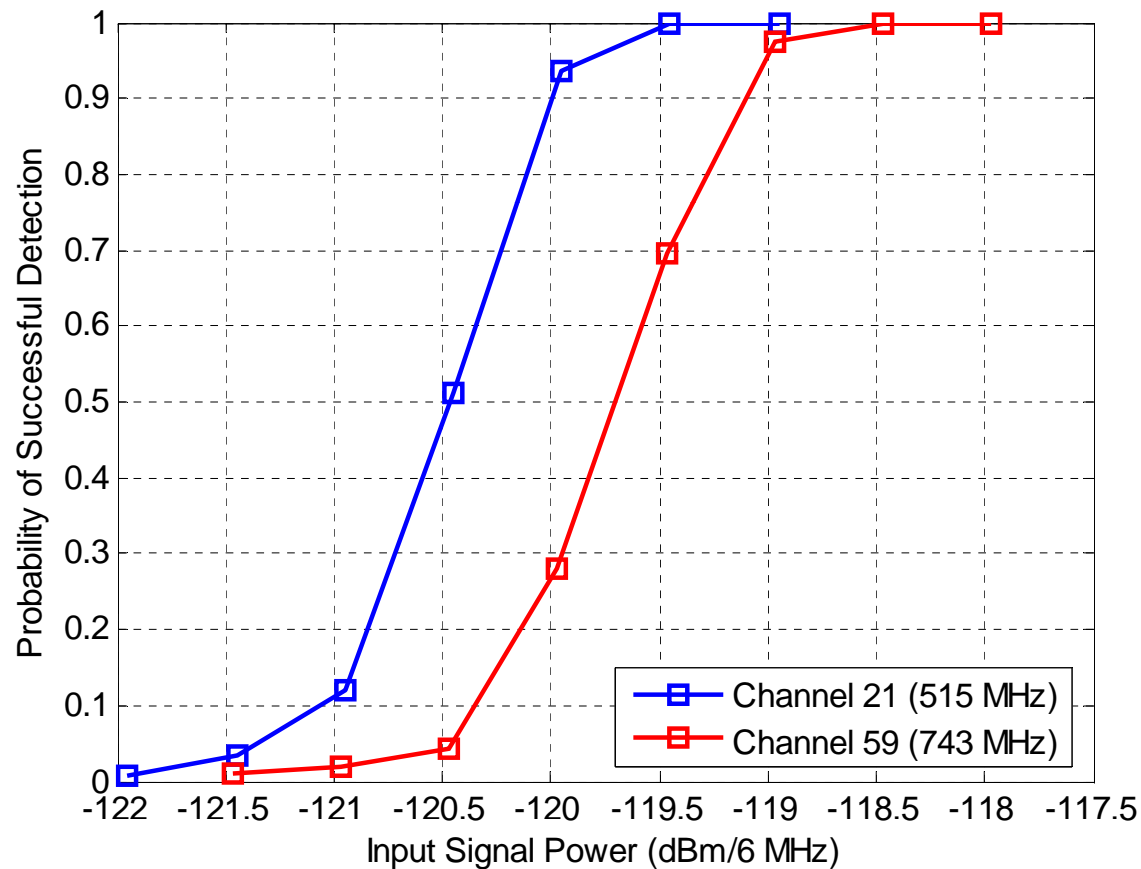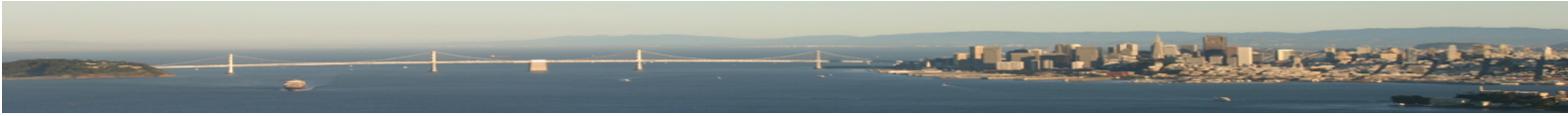
ADAPTRUM CR REV. 2 PICTURES

ADAPTRUM CR REV. 2 FEATURES

- Frequency range: 150 – 1000 MHz (tunable)

- Signal bandwidth: 1 MHz – 10 MHz (tunable)

- Data throughput: 3 Mbps – 15 Mbps (6 MHz channel)

- Transmit power: 100 mW – 1 W (conducted)

- Modulation

  - OFDMA

  - QPSK, 16 QAM and 64 QAM

- Network topology

  - Point to multipoint (Base Station and Client Devices)
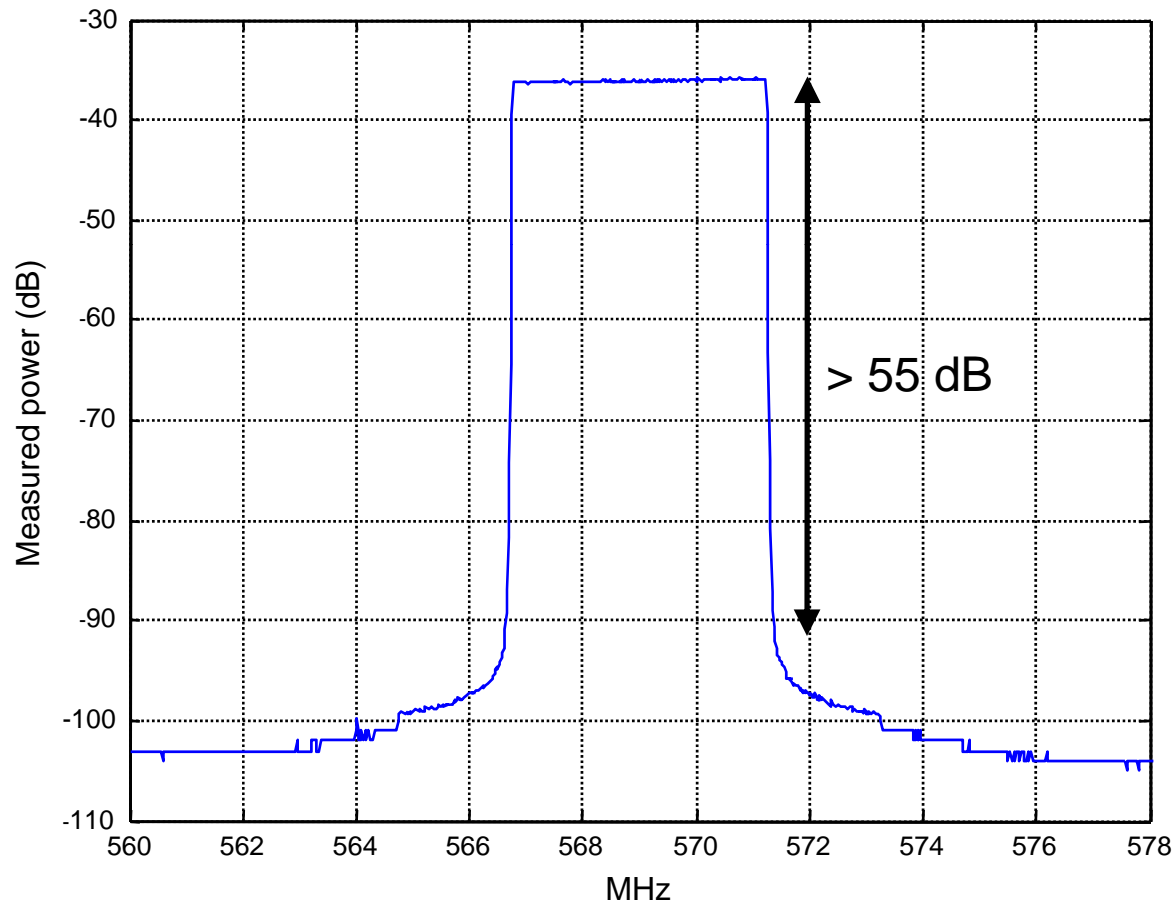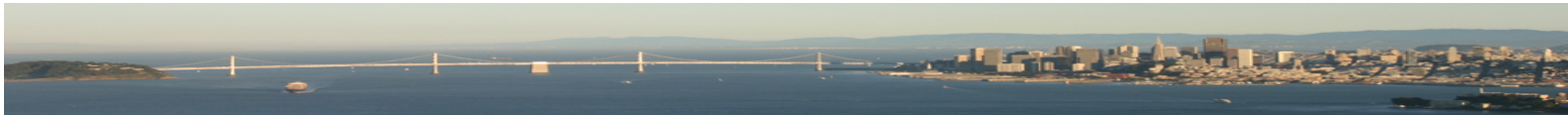 - Nomadic and Mobile NLOS operation

    www.adaptrum.com

MEASURED DTV DETECTION PERFORMANCE

MEASURED TRANSMISSION SPECTRUM

      www.adaptrum.com

MEASURED RECEIVER SENSITIVITY